

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
CHARLESTON DIVISION**

CITY OF BEAUFORT, CITY OF)
CHARLESTON, CITY OF FOLLY BEACH,) No. _____
CITY OF ISLE OF PALMS, CITY OF NORTH)
MYRTLE BEACH, SOUTH CAROLINA)
SMALL BUSINESS CHAMBER OF)
COMMERCE, TOWN OF BLUFFTON, TOWN)
OF BRIARCLIFFE ACRES, TOWN OF EDISTO)
BEACH, TOWN OF HILTON HEAD ISLAND,)
TOWN OF JAMES ISLAND, TOWN OF)
KIAWAH ISLAND, TOWN OF MOUNT)
PLEASANT, TOWN OF PAWLEYS ISLAND,)
TOWN OF PORT ROYAL, TOWN OF)
SEABROOK ISLAND, TOWN OF AWENDAW,)
)
Plaintiffs,)
)
v.)
)
NATIONAL MARINE FISHERIES SERVICE,)
CHRIS OLIVER, in his official capacity as the)
Assistant Administrator for Fisheries, and)
WILBER ROSS, in his official capacity as the)
Secretary of Commerce,)
)
Defendants.)
)

COMPLAINT

1. This Action is brought in response to five incidental harassment authorizations (“IHAs”) issued on November 30, 2018 by Defendant National Marine Fisheries Service (“NMFS”) to allow five overlapping geophysical or seismic airgun surveys to occur simultaneously along the Atlantic Outer Continental Shelf (“OCS”), including the waters off of South Carolina’s coast, as well as a Biological Opinion, Environmental Assessment and Finding of No Significant Impact (“FONSI”) issued as part of NMFS’s duties under

the Marine Mammals Protection Act, the Endangered Species Act, and the National Environmental Policy Act.

2. 2-Dimension (2-D) geophysical surveys use seismic airguns to explore and evaluate deep geologic formations and are designed to cover thousands of square miles looking for potential oil and gas reserves beneath the ocean floor in order to allow offshore oil and gas drilling. The acoustic sources consist of airgun arrays while the receivers consist of towed cables with hydrophones. When an airgun array is activated, an acoustic energy bubble pulse is emitted and reflected or refracted back from the seafloor and subsurface interfaces.
3. The geophysical surveys involve blasting these acoustic pulses at the ocean floor approximately every ten seconds, twenty-four hours a day, for months at a time, producing extreme loud noises which can be audible for hundreds of kilometers and, under certain circumstances, thousands of kilometers from the source.
4. The NMFS authorizations allow this seismic blasting activity to occur within the U.S. Exclusive Economic Zone (EEZ) (*i.e.*, to 200 nautical miles) from Delaware to approximately Cape Canaveral, Florida, including off the coast of South Carolina, as well as additional waters out to 350 nautical miles from shore.
5. Every coastal municipality in the state of South Carolina has passed resolutions opposing seismic airgun surveying, including all of the named Plaintiff Cities and Towns, because of the harm that it would cause to the marine environment that supports vibrant coastal economies, including tourism and commercial fishing. Plaintiff Cities and Towns have proprietary interests in the marine resources, tax revenues and aesthetics that will be harmed along the coast if seismic airgun surveying is allowed to proceed.

6. The South Carolina Small Business Chamber of Commerce has opposed seismic airgun surveying since January of 2015 because of the economic harm it would cause to coastal small businesses related to the commercial and sports fishing industries and tourism industry.
7. The coast of South Carolina similarly provides habitat for diverse species which are popular for viewing by tourists and locals alike, including whales, dolphins, sea turtles and other marine life.
8. Seismic testing and oil drilling off of South Carolina's coast stands to have a tremendous impact on the important tourism industry of this State. The four coastal counties of Horry, Georgetown, Charleston and Beaufort generate 71% of the state total Accommodations Tax receipts. In other words, these four coastal counties alone account for more than \$13.5 Billion in tourism spending annually. From 2007 to 2014, the economic value of businesses making use of ocean and coastal waters in the state grew from \$37 billion to \$44 billion, according to the most recent National Ocean Economic Program report using employment and wage data to track trends. In the same time period, jobs grew from 433,183 to 445,398. Total wages also grew from \$14.6 billion to \$17.2 billion. This economic growth results from and is reliant on, in large part, a vibrant and healthy marine ecosystem.
9. Seismic testing also stands to negatively impact and even destroy the coastal fishing industries in South Carolina. While the commercial fishing industry is declining in the state, wild-caught seafood still consists of about half of consumption. Furthermore, the recreational fishing industry is booming, and worth about \$600 million per year in South Carolina.

10. Seismic airgun surveys would irreparably harm marine life, in large numbers and with a large impact, and the communities and businesses that use and enjoy this marine life and rely on it for their economic livelihoods. The seismic surveying authorized by the Defendant NMFS is in violation of the Marine Mammal Protection Act, the Endangered Species Act, the National Environmental Policy Act and the Administrative Procedures Act.

PARTIES

11. Plaintiffs are coastal municipalities in South Carolina, mostly in the Charleston Division, along with the South Carolina Small Business Chamber of Commerce, which depend upon a healthy economy, population and environment.
12. The South Carolina Small Business Chamber of Commerce has over 5,000 members statewide, and advocates to make state government more small business friendly. Chamber members include Blue Wave Adventures and Rover Tours, Inc., both of whom provide boat tours for viewing dolphins, sea turtles and other natural and historic resources; Off the Hook Fishing Charters, which provides ocean-bound fishing expeditions out of Hilton Head Island; Murrells Inlet Seafood, which sells fresh, locally-sourced seafood; and numerous hotels, restaurants and other businesses that depend on healthy and plentiful fisheries and marine life for their continued existence.
13. The City of Beaufort was founded in 1711 and is South Carolina's second oldest city with a 2016 census population of 12,361. Beaufort has a rich cultural heritage, as evidenced by its 304-acre National Historic Landmark District. Beaufort is known for its scenic natural environment, which supports much of the city's economy, including tourism, fishing, filming and recreation. Beaufort's proprietary interests, including in

natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.

14. The City of Charleston was founded in 1670 and is the oldest and largest city in South Carolina with a 2016 census population of 134,385. It is an historic port city on the Charleston Harbor inlet with a rich history, well-preserved architecture, distinguished restaurants, and hospitable people. Charleston has a large tourism economy that is closely tied to its location on the water, which support a variety of commercial and recreational activities. Charleston's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
15. The City of Folly Beach, known as "the Edge of America," is on Folly Island in Charleston County with a 2016 census population of 2,782. Folly Beach has gained prominence as one of the more popular surf spots along the East Coast. Folly Beach is an eclectic beach community, whose economy is almost entirely built around tourism. Folly Beach is also a prime viewing area for endangered North Atlantic right whales, which migrate along the coast. Folly Beach's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
16. The City of Isle of Palms is a barrier island in Charleston County, with the Intracoastal Waterway on one side and the Atlantic Ocean on the other. Isle of Palms features a beautiful beach, golf, tennis, beach volleyball, and a marina, all of which support a strong recreational tourism industry. It is also known for sea turtle nesting. The 2016 census population of Isle of Palms is 4,395. Isle of Palms's proprietary interests, including in

natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.

17. The City of North Myrtle Beach is located on the northern end of the Grand Strand area in Horry County and has a 2016 census population of 16,032. North Myrtle Beach has a thriving tourism-driven economy reliant upon healthy beaches and related recreational opportunities. North Myrtle Beach works to support and enhance a safe community for families, visitors and businesses to prosper. North Myrtle Beach's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
18. The Town of Bluffton is a Lowcountry town in Beaufort County with a 2016 census population of 18,897. Bluffton is one of the fastest growing municipalities in South Carolina. Bluffton is known for its eclectic Old Town district and natural views of the May River. Bluffton's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
19. The Town of Briarcliffe Acres is located along the coast of Horry County, between North Myrtle Beach and Myrtle Beach with a population of 551. Briarcliffe Acres was developed as a retirement community, and was one of the first planned communities in the Southeast. Briarcliffe Acres's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
20. The Town of Edisto Beach is on Edisto Island in the southeastern tip of Colleton County with a 2016 census population of 418. Edisto Beach is among the most affluent communities in the state, prized for its large amounts of permanently protected areas.

Edisto Beach's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.

21. The Town of Hilton Head Island is a Lowcountry resort town and barrier island in Beaufort County, located twenty miles northeast of Savannah, Georgia. Hilton Head Island has twelve miles of beachfront on the Atlantic Ocean, making it a popular vacation destination that draws millions of tourists, pumping billions of dollars into the local economy, each year. Hilton Head is known for its eco-friendly development, plays, music, annual community festivals, and golf tournaments. Hilton Head has a 2016 census population of 40,500. Hilton Head's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
22. The Town of James Island is located on the central and southern parts of the island in Charleston County with a population of 11,500. James Island is nestled between the Charleston Harbor and the meandering Stono and Folly Rivers, with scenic marsh views, majestic trees and a residential community with the small-town feel its residents and visitors know and enjoy. James Island's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
23. The Town of Kiawah Island is a barrier island on the Atlantic located southwest of Charleston in Charleston County. It is primarily a gated beach and golf resort known for its spacious villas, beaches, and acclaimed golf courses. The tidal creeks, salt marshes, and Kiawah River host abundant recreational boating and fishing activities. Kiawah Island has a 2016 census population of 1,771.

24. The Town of Mount Pleasant is the largest town in South Carolina, located in Charleston County, and linked to the City of Charleston by the Ravenel Bridge, which spans over the Ashley River. Mount Pleasant has a 2016 census population of 84,170, and growing.
25. The Town of Pawleys Island is an Atlantic coast barrier island in Georgetown County and is one of the oldest resort areas on the eastern coast of the United States with a population of 107. It has over three miles of sandy beaches on its eastern side and tidal creeks and marshes on its western side. Pawleys Island's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
26. The Town of Port Royal is on Port Royal Island in Beaufort County with a 2016 census population of 12,785. Port Royal has a large and sheltered natural harbor that has supported trade through port facilities for centuries. Port Royal is known for its fishing, boating and community events. Port Royal's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
27. The Town of Seabrook Island is a barrier island in Charleston County, bordered by the Atlantic Ocean to the south, the North Edisto River to the west, and Bohicket Creek to the north. Seabrook Island is a private residential community known for its beaches, horseback riding, championship golf courses and racquet club and has a population of 1,866. Seabrook Island's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.
28. The Town of Awendaw was established in 1992 and is located in Charleston County, approximately 18 miles north of the City of Charleston. Awendaw sits nestled along the

eastern edge of the Francis Marion National Forest and the western edit of the Cape Romain National Wildlife Refuge. The Town is adjacent to Bulls Bay, a healthy and robust estuarine system. Awendaw's population was 1,294 at the 2010 census.

Awendaw's proprietary interests, including in natural resources, tax revenues, and aesthetics, would be harmed by seismic airgun surveying and the concurrent loss of marine life.

29. National Marine Fisheries Service (“NMFS”) is the agency that issued the IHAs challenged in this case. NMFS is housed within the National Oceanic and Atmospheric Administration (“NOAA”), which, in turn, is housed within the U.S. Department of Commerce.
30. Chris Oliver, as the Assistant Administrator for Fisheries, is the highest-ranking official within NMFS.
31. Wilbur Ross, as the Secretary of Commerce, oversees NMFS's compliance with the Marine Mammals Protection Act (“MMPA”), Endangered Species Act (“ESA”), and the National Environmental Policy Act (“NEPA”).

JURISDICTION AND VENUE

32. This Court has subject matter jurisdiction over this case pursuant to 28 U.S.C. § 1331, and may issue declaratory and further relief pursuant to 28 U.S.C. §§ 2201 and 2202. Plaintiffs are entitled to bring this action pursuant to the Administrative Procedure Act, 5 U.S.C. §§ 701-06.
33. This Court has personal jurisdiction over Defendants because they are agents and officers of the United States. The seismic airgun surveying authorized by the Defendants would occur off of the entire coast of South Carolina.

34. Venue is proper in this Court and in the Charleston Division of the Court pursuant to 28 U.S.C. § 1391(e) and Local Civil Rule 3.01(A)(2) DSC, because most of Plaintiffs municipalities are located within the Charleston Division of this Court, namely the Cities of Charleston, Folly Beach and Isle of Palms, and the Towns of Edisto Beach, James Island, Kiawah Island, Mount Pleasant, Pawleys Island, Awendaw and Seabrook Island; and because many business members of the SC Small Business Chamber are located within the Charleston Division of this Court.

LEGAL BACKGROUND

MARINE MAMMAL PROTECTION ACT

35. The Marine Mammal Protection Act was enacted in 1972 by Congress in recognition of the “significance, esthetic and recreational as well as economic,” value of marine mammals. 16 U.S.C. § 1361 (2016). The MMPA was enacted with the primary objective of managing and maintaining a healthy and stable marine ecosystem. *Id.* To further this objective, the MMPA placed a moratorium on “taking” and importing of marine mammals. *Id.* § 1371 (2016). “The term ‘take’ means to harass, hunt, capture, or kill.” *Id.* § 1362(13) (2016).

36. The MMPA allows for the taking of small numbers of marine mammals in some limited circumstances through the issuance of IHAs. *Id.* § 1371(a)(5)(D)(i). In order for harassment to be authorized it must have a (1) “negligible impact” on the species and only be (2) “of small numbers of marine mammals.” 16 U.S.C. § 1371(a)(5)(D)(i)(I).

ENDANGERED SPECIES ACT

37. When Congress passed the Endangered Species Act (“ESA”) in 1973, it recognized that our rich natural heritage is of "esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people." 16 U.S.C. § 1531(a)(3). It further

expressed concern that many of our nation's native plants and animals were in danger of becoming extinct.

38. The purpose of the ESA is to protect and recover imperiled species and the ecosystems upon which they depend. It is administered by the U.S. Fish and Wildlife Service (FWS) and the Commerce Department's National Marine Fisheries Service (NMFS). NMFS is responsible for protecting marine wildlife.
39. The ESA requires NMFS to ensure that actions it authorizes, funds, or carries out are not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. 16 U.S.C. § 1536(a)(2). The law also prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife. 16 U.S.C. § 1538(a)(1)(B).

NATIONAL ENVIRONMENTAL POLICY ACT

40. The National Environmental Policy Act "declares that it is the continuing policy of the federal government, in cooperation with state and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans. 42 U.S.C. § 4331(a).
41. The National Environmental Policy Act requires agencies to prepare or adopt an environmental impact statement ("EIS") before undertaking a major federal action that will significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(C).
42. The EIS serves several functions. First, it ensures that an agency takes a hard look at a proposed project's environmental effects. Second, it guarantees that the agency considers

reasonable alternatives to the proposed project that may have fewer adverse impacts on the environment before deciding whether to undertake the project. Finally, the EIS presents to the public detailed information about a proposed project, its impacts, and its alternatives, so that the public may participate in the decision-making process.

43. To implement the requirements of NEPA, the Council on Environmental Quality has promulgated regulations applicable to all federal agencies. See 40 C.F.R. §§ 1500-1508 ("the CEQ regulations").
44. The CEQ regulations implementing NEPA require that an EIS contain a statement of purpose and need for the proposed action which "shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including their proposed action." 40 C.F.R. § 1502.13.
45. NEPA requires an agency to include in an EIS a "detailed statement" on "alternatives to the proposed action." 42 U.S.C. § 4332(2)(C)(iii). In this statement, the agency must rigorously explore and objectively evaluate all reasonable alternatives that could achieve the underlying project purpose. 40 C.F.R. § 1502.14(a). This alternatives analysis is "the heart of the environmental impact statement." 40 C.F.R. § 1502.14.
46. The EIS must be prepared with objective good faith and must fully and fairly discuss the adverse environmental effects of the proposed action. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.1. These environmental effects include both direct and indirect effects. The CEQ regulations define "direct effects" as effects "which are caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). The regulations define "indirect effects" as effects "which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). "Effects includes ecological (such as the effects on natural resources and on the components, structures,

and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.” 40 C.F.R. § 1508.8(b).

ADMINISTRATIVE PROCEDURES ACT

47. The Administrative Procedure Act (“APA”) requires the court to review agency decisions and find them unlawful if the conclusions are, “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A) (2016).

ALLEGATIONS OF FACT

48. Plaintiffs reallege and incorporate by reference the statements made in paragraphs 1 through 47, and in addition make the following allegations of facts to the best of their knowledge.
49. The seismic airgun surveys at issue would entail extremely loud, repetitive, explosive sounds that can travel up to 2,500 miles as often as every ten seconds for months along the Atlantic OCS.
50. Commercial and recreational fishing are dependent upon the abundance of fish and shellfish in the Atlantic waters. Seafood processors, seafood wholesalers, seafood retailers, and restaurants are all dependent on successful commercial fishing.
51. Seismic airgun surveys have been shown to cause a 40% to 80% decline in fish that are caught for commercial and recreational purposes because the noise drives fish away from their habitat and/or causes permanent physical harm. Seismic airgun surveys have also caused shellfish that are commercially harvested, such as crabs and scallops, to both decline in population and become deformed, which would make such catches unmarketable. And seismic airguns have been shown to cause significant decreases in the abundance of zooplankton, the base of the food chain that supports all marine life.

52. Given these impacts associated with seismic airgun surveys, the authorizations at issue are likely to cause SC Small Business Chamber members to lose significant revenue that is currently generated by and reliant upon healthy marine environments undisturbed by seismic testing or offshore drilling and/or to go out of business entirely.
53. In addition to losing fish for sport fishing or consumption, seismic airgun surveying harms threatened and endangered whales and sea turtles. Marine mammals depend on sound to find mates and food, both of which are necessary for survival. Seismic airguns can interfere with these activities, resulting in significant harm and even death to protected marine species. For some species, such as the North Atlantic right whale, this harm is so significant that it could push the already highly imperiled species closer to extinction.
54. Business members of the Chamber that rely on recreation along the Atlantic OCS will also be directly impacted through lost revenues if seismic airgun surveying is allowed. Activities such as diving will not be possible, or will become less marketable, due to the noise. Business members of the Chamber that offer other recreational activities tied to viewing marine life will suffer because seismic airguns have been shown to cause a reduction in marine life. These recreational businesses will lose revenue if seismic surveying goes forward because their customers pay to engage in activities along and near the Atlantic OCS that rely upon fish, whales and sea turtles that would be physically harmed, beached or driven away from viewing areas and natural habitat by seismic airgun surveys. Thus, seismic testing in waters off South Carolina's coast would discourage and limit tourists and visitors from engaging the services offered by the business members of the Chamber.

55. The noise from the seismic airgun surveys will travel for hundreds, or possibly thousands, of kilometers, disrupting the behaviors of marine species, for a collective total of 849 days and nights of impact for the five IHAs authorized within one year. This cumulative exposure from multiple sources will inevitably impact both species and stocks in the area.
56. Marine mammals that are very close to the source may experience physiological injury. Those further away will most likely exhibit aggressive avoidance behavior and vacate the area when exposed to airguns. This harm and harassment disrupts foraging, mating, communication, and/or migration activity, and could separate a calf from its mother. If a marine mammal is exposed to harassing noise repeatedly from round-the-clock, multiple surveys conducted over many months, as is authorized by NMFS in this case, it will not have time to recover the energy expended by its avoidance behavior.
57. Cumulative impacts are not simply the sum of the impacts of each activity. Exposure to multiple airguns, along with exposure to harassing noise from other activities such as vessel traffic, can cause synergistic effects to marine mammals. These are impacts that are greater and possibly different than the impacts of the individual airguns combined. There is a limit to how much abuse a marine mammal (or any animal) can take without dire consequences. That is why avoidance behavior caused by exposure to repeated harassing noise from airguns could weaken a whale or dolphin to the point where these individuals experience long-term consequences, including impacts on reproduction and survival. NMFS fails to address this risk from cumulative effects.
58. NMFS does not have the authority to issue IHAs unless the takings would (1) be of "small numbers," (2) have no more than a "negligible impact" on those marine mammal species or stocks, (3) be based upon the "best available science," and (4) have the "least

practicable impact on such species or stock." 50 C.F.R. § 216.102; see also 16 U.S.C. 1371(a)(3)(A) (requiring "best scientific evidence available"). "Small numbers" have been upheld by courts for numbers that are in ranges of 6.5 to 12 percent of the population of a given species, but never for more than that amount. "Negligible" impacts are described in MMPA regulations as those that "cannot be reasonably expected to, and [are] not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." 50 C.F.R. § 216.103.

59. NMFS's Biological Opinion found that North Atlantic Right Whales are on the brink of extinction: the species "may decline towards extinction if prey conditions worsen, as predicted under future climate scenarios, and anthropogenic mortalities are not reduced."
60. The seismic airgun surveying proposed would cause behavioral and stress responses in marine mammals that are more than "negligible" or "small," indeed the impact on marine mammals is significant, whether viewed individually or cumulatively. On their face, the IHAs allow for up to 33 percent of marine mammal species to be impacted for each applicant, which does not qualify as "small," and is therefore in violation of the MMPA. See 50 C.F.R. § 216.102.
61. Relatedly, the impacts are not negligible under the best available science, which indicates serious impacts to marine mammals, including porpoises and whales, notably the endangered right whale. Studies have shown that seismic airgun surveying impacts many aspects of marine mammal life, from reproduction to hunting and gathering food. Simply put, the impacts to marine mammals are too significant and pervasive to qualify as "negligible."
62. In addition to overwhelming scientific evidence of harm to marine mammals from the noise of seismic airgun surveying, there is also extensive evidence of harm to species in

the food chain for such species. Perhaps most startlingly, a recent study indicates that seismic blasting causes significant mortality in zooplankton populations. Zooplankton comprise the first level of many food chains and underpin ocean productivity. In this regard, healthy populations of fish, top predators and marine mammals are dependent upon viable planktonic productivity. If seismic airgun surveying along the Atlantic OCS proceeds, it stands to reduce availability of food for those impacted marine species still healthy enough to hunt for it.

63. If zooplankton populations decline, marine species higher on the food chain which feed on zooplankton could be impacted, including some of the marine mammal species covered by the MMPA and living in the area of the Atlantic OCS.
64. Zooplankton are not the only food source affected by seismic blasting. As mentioned above, studies have shown 40%-80% reduced catch rates for certain fish and a 78% decline in reef-fish abundance during the evening hours (when habitat use is at its peak). Studies have also shown that scallop larvae, for example, are impacted with deformities from seismic blasting. In addition to decreased fish and shellfish populations, another result of blasting is the practical immobilization of squid, cuttlefish, and octopus. According to a recent study, this immobilization is caused by the pulping of their internal balancing organs by low frequency sound. All of these animals are part of the food chain that marine mammals depend upon. For example, cephalopods are an important food source for beaked whales, and the pulping of their brains will reduce their availability for capture and consumption by beaked whales. The mass immobilization of food sources, for beaked whales and others, could lead to habitat overcrowding, over-competition, and strandings.

65. In addition to loss of food sources, whales are also less likely to feed around seismic airgun surveys. The feeding rates of Sperm Whales have demonstrated decline near seismic noise, and researchers have observed changes and cessation in the calls of Fin Whales. These observations suggest an effect on both the availability of food sources and the marine mammals' ability to capture them, which is compounded, not negligible, and likely to cause a significant decline in the annual rates of survival for marine mammals.
66. The IHAs are intrinsically flawed because they would allow for all blasting to occur simultaneously, while failing to provide a cumulative analysis, as required in 40 C.F.R. § 1508.25(c). Instead, each application is largely reviewed in isolation. The failure to evaluate cumulative impacts is especially problematic, given that the Atlantic OCS supports a unique and highly varied ecosystem, including dozens of species protected by the MMPA and ESA. The IHAs fail to conduct an analysis of the cumulative impacts that running all five of these seismic airgun surveys would have on marine mammals.
67. Of the five applicants, three (Spectrum, TGS, and ION) seek to conduct testing in the same geographic region (from Delaware to northern Florida). The other two applicants (Western and CGG) seek to test in areas that are overlapped by the other three (Maryland to northern Florida and Virginia to Georgia, respectively); none of the proposed testing sites are isolated, as the authorizations allow multiple applicants to conduct seismic airgun arrays across the same locations. Thus, while some variation exists among the five companies' projects in terms of number of days for data acquisition, number of airgun arrays, and extent of testing, all are set to occur in the same geographic region and for the exact same purposes. As a result, the IHAs allow marine mammals in the testing area to be constantly and/or repeatedly exposed to blasting from multiple seismic companies, and over a broad area; avoiding exposure altogether will be impossible.

68. NMFS cumulative effects analysis considers impacts resulting from a range of foreseeable activities; however, it fails to look at the cumulative effects from the five competing seismic testing companies all conducting activities in the same areas which will impact the same individuals repeatedly.
69. Further, a lack of cumulative analysis undermines NMFS's predicted take numbers. The NMFS criteria for classifying and determining takes, as well as for granting the IHAs, is based on inadequate analysis of multiple stressors. While NMFS claims to evaluate the "combined effect," this conclusory statement is not followed up with any substantive cumulative impacts analysis in the risk analysis of protected species.
70. In addition to a dearth of cumulative impact analysis, the mitigation measures proposed for the IHAs are flawed. The IHAs have not been updated to include best available data and practices or enhanced mitigation procedures identified in comments submitted by Plaintiffs. Simply put, the "mitigation" involves individuals using passive listening technology and looking out over the surface of the water when visibility is good during daylight hours to detect marine mammals; however, seismic blasting can still continue in poor visibility or at night simply by relying on the passive listening technology designed to detect marine mammals who might vocalize while blasting is occurring. Even when a marine mammal is detected, such an observation does not require shut down of operations for all species and is limited in distance from the source to 1.5 km. While marine mammals do come to the surface sometimes, they can dive deep and go for extended periods without surfacing. Furthermore, seismic airgun noise reduces communication, which means that marine mammals are less likely to be detected by someone listening out for them.
71. The IHAs completely ignore the risk of impacts from underwater munitions and nuclear

waste that have been discarded in the Atlantic in casings and left to deteriorate in the saltwater for decades. There are tons of U.S. bombs, grenades, rockets and mortars that the U.S. military dumped in the Atlantic Ocean from the end of World War I until 1970. Chemical warfare agents were also discarded in the Atlantic, including 10,000 tons of lewisite, an arsenic-laced blister agent; nearly 6,000 tons of mustard; more than 500 tons of arsenic trichloride and more than 250 tons of sarin, according to a 2009 report by the Department of Defense. In all, 33 munitions disposal sites are scattered along the Atlantic Coast from Florida to Maine, encompassing much of the ocean area where the proposed testing would occur. Five of these disposal sites are off the coast of South Carolina.

72. Similarly, there are rusting, steel drums of radioactive waste that were dumped in the Atlantic Ocean under the guidance of the old Atomic Energy Commission. From 1946 through 1962, the U.S dumped approximately 89,400 containers with an estimated inventory of 94,400 curies of radioactivity in the Atlantic and Pacific Oceans, according to a 1980 Environmental Protection Agency report prepared for a House subcommittee. There are at least 23 known disposal sites for radioactive waste in the Atlantic Ocean, including five off the Georgia coast, four off the South Carolina coast, three off Florida's coast and two off North Carolina's coast.
73. The Defendants entirely failed to consider the direct, indirect and cumulative impacts that seismic airgun blasting could have on the rusting, deteriorating casements and steel drums containing discarded munitions and/or nuclear waste. The testing could result in disbursing toxic contents into the ocean, endangering marine life and human life through long-term exposure, yet NMFS failed to address this serious risk.
74. NMFS considered only two alternatives: the no action alternative and the selected “preferred” alternative. NMFS failed to consider any alternatives that would reduce or

minimize the cumulative impacts of five separate companies all conducting the same type of seismic surveys across the same geographic areas at overlapping times and for the same purposes.

75. NMFS specifically failed to consider any alternative that would reduce or eliminate duplicative and/or overlapping surveys.

FIRST CAUSE OF ACTION

(Arbitrary, Capricious and Unlawful Action under the MMPA)

76. Plaintiffs repeat and reallege Paragraphs 1-75 as if restated verbatim.
77. In order for harassment to be authorized it must have a (1) "negligible impact" on the species and only be (2) "of small numbers of marine mammals." 16 U.S.C. § 1371(a)(5)(D)(i)(I).
78. Pursuant to the MMPA, "harassment" means any act of pursuit, torment, or annoyance which: (i) has the potential to injure a marine mammal or marine mammal stock in the wild; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering." 16 U.S.C.A. § 1362.
79. These authorizations must be supported by the best scientific information available. See 50 C.F.R. § 216.102(a).
80. "Negligible impact is an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." 50 C.F.R. § 216.103 (2016).
81. Even when NMFS determines the activity will result in negligible impacts, the agency must adopt mitigation measures that ensure "the least practicable impact," which is a

stringent standard. 16 U.S.C. § 1371(a)(5)(D)(ii)(I). Instead of requiring stringent mitigation measures, NMFS does not even impose shutting down operations when marine mammals are detected, except for a few species at limited distances (1.5 km). Of course mitigation measures that include shutting down anytime a marine mammal is detected, as was proposed in the draft IHAs would make less of an impact on those individuals.

NMFS's decision to exclude some species from the protection of a shutdown to pause operations and allow the animals to safely pass by is arbitrary and capricious because there is no rationale to distinguish why some endangered species should suffer known additional impacts and harassment while others receive the protection of a shutdown of operations upon observation within a 1.5 km range of the source.

82. NMFS found a “negligible impact” to whales and dolphins without adequate explanation, and the Service failed to consider the cumulative impacts of the surveys themselves, as well as when combined with other regional activities (e.g., Navy training) that harm these same animals.
83. Pursuant to the MMPA, “‘harassment’ means any act of pursuit, torment, or annoyance which: (i) has the potential to injure a marine mammal or marine mammal stock in the wild; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.” 16 U.S.C.A. § 1362. NMFS ignored any “potential” to disturb or disrupt marine mammals when assessing Level B harassment and only focused on certain harassment, when setting the acoustic thresholds at 160 dB. NMFS’s failure to consider potential disruptions is a clear violation of statute, and thus arbitrary, capricious and an abuse of discretion.

84. NMFS double-counted the benefits of mitigation by reducing the take estimates because of mitigation measures, and then arguing negligible impacts based upon mitigation measures on top of the reduced take estimates. Thus, the negligible impacts analysis is arbitrary, capricious, and an abuse of discretion.
85. The administrative record does not support a finding that only small numbers of a marine mammal species will be taken under the IHAs.
86. The MMPA does not define “small numbers” in a quantitative sense, however, “NMFS interprets the concept in relative terms through comparison of the estimated number of individuals expected to be taken to an estimation of the relevant species or stock size.”⁸² Fed. Reg. 26,295 (Jun. 6, 2017).
87. NMFS's authorizations indicated "small numbers" could include up to 33% of a species' population, per species, per seismic airgun surveying company.
88. A 33% take of a species' population is not a small number, and such an authorization is contrary to the MMPA.
89. Furthermore, capping the takes at 33% for each of the five surveying companies does not limit takes to small numbers because cumulatively, and for some species individually, the take authorizations are much higher than 33%.
90. For example, Table 15 shows the common bottlenose dolphin has an abundance estimate of 149,785. Notice of Final IHAs, p. 373 (Nov. 30, 2018). NMFS then authorizes Spectrum to take: 14,938; TGS to take: 40,595; ION to take 2,599; Western to take 23,600; and CGG to take 9,063 common bottlenose dolphins. *Id.* Combining all five surveys, which are being permitted to occur within the same time period, would mean 90,795 common bottlenose dolphins are authorized to be taken. The IHA then is not authorizing 33% of a species' population to be taken, but rather 61% to have a take as

defined as a Level B harassment. Thus, the IHAs authorize more than a small number of takes.

91. By authorizing all of these surveys to occur at the same time, the agency's action is arbitrary and capricious in not complying with the "small number" requirement.
92. NMFS fails to address the cumulative impact of all five surveys with regards to the "small number" analysis. This failure demonstrates a lack of rational decision-making and amounts to the arbitrary and capricious agency action prohibited by the Administrative Procedure Act. 5 U.S.C.S. § 706(2)(a). In order to avoid arbitrary and capricious decision-making, the agency must undertake an analysis that acknowledges and evaluates the cumulative effects of multiple seismic operations. Had NMFS undertaken this analysis, the only scientifically and rationally-supported conclusion is that the cumulative impacts are too great to avoid substantial environmental harm and thus cannot be authorized.
93. NMFS's issuance of the IHAs violates the MMPA and is arbitrary, capricious, and an abuse of discretion, in violation of the APA. 16 U.S.C. § 1371(a); 50 C.F.R. § 216.107; 5 U.S.C. § 706.

SECOND CAUSE OF ACTION

(Arbitrary, Capricious and Unlawful ESA Biological Opinion)

94. Plaintiffs repeat and reallege Paragraphs 1-93 as if restated verbatim.
95. NMFS must ensure that all actions it authorizes are "not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification" of a listed species' habitat. 16 U.S.C. § 1536(a)(2). When some incidental take of members of a listed species is likely to result from an

activity, the ESA further requires NMFS to issue an incidental take statement. 16 U.S.C. § 1536(b)(4).

96. The IHAs and corresponding Biological Opinion are reviewable under the APA. 16 U.S.C. § 1536(a)(2), (b)(4).
97. The NMFS determined that harm and harassment to the North American right whale authorized by its IHAs is not likely to jeopardize the continued existence of the species. NMFS's Biological Opinion states that the North Atlantic right whales have a limited distribution, small and declining population, and that the overall health of the population is poor. Against the best available scientific data regarding population dynamics and abundance, and the effect of such activities on the species, NMFS issued its decision. As NMFS decision is unsupported by the best scientific data, it is arbitrary and capricious.
98. NMFS ignored the cumulative effects of the seismic surveys on threatened and endangered species in violation of 50 C.F.R. § 402.12(f)(4). NMFS failed to address the effects of the incidental takes in conjunction with any other taking or permitted government activity in the action area. NMFS failed to analyze the impact to the baseline beyond simply listing the numbers of the takings associated with each permitted activity. These failures to analyze cumulative effects violate the APA, 5 U.S.C. § 706(2).
99. NMFS erroneously concluded that there would be no jeopardy to the continued existence of listed species, relying on inadequate mitigation measures and failing to take into account the cumulative impacts on the continued existence of listed species. 50 C.F.R. § 402.14(g)(3); 50 C.F.R. § 402.14(h)(3). Therefore, NMFS' no jeopardy conclusion is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2).

100. NMFS is required to use the best scientific and commercial data available in the Biological Opinion. Instead, NMFS ignored scientific and commercial data, which is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2).
101. NMFS concluded that seismic airgun surveys are not likely to jeopardize the continued existence of any threatened or endangered species, despite a complete lack of factual basis for such a conclusion. Thus, NMFS's failure to provide a basis for its conclusion in the Biological Opinion or elsewhere, and is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2).

THIRD CAUSE OF ACTION

(Arbitrary, Capricious and Unlawful ESA Incidental Take Statement)

102. Plaintiffs repeat and reallege Paragraphs 1-101 as if restated verbatim.
103. Pursuant to Section 7 of the ESA, NMFS must issue an incidental take statement when a federal agency action is likely to result in incidental take of members of the species. 16 U.S.C. § 1536(b)(4). The incidental take statement must specify measures to minimize impacts, and conditions for minimization. Id. The incidental take statement must also specify the extent of authorized take. 50 C.F.R. § 402.14(i)(1)(I).
104. NMFS determined that loggerhead sea turtles and leatherback sea turtles may be found within the action area are expected to be exposed to the active acoustic sources associated with the proposed action at a level that may result in adverse effects. While NMFS authorized the take of endangered sea turtles in its Biological Opinion, it failed to issue an incidental take statement limiting the number of takes. This failure to quantify the number of takes is arbitrary, capricious, an abuse of discretion, and otherwise not in accordance with the law, in violation of the APA, 5 U.S.C. § 706(2).

FOURTH CAUSE OF ACTION

(Arbitrary, Capricious and Unlawful NEPA Analysis)

105. Plaintiffs repeat and reallege Paragraphs 1-104 as if restated verbatim.
106. The National Environmental Policy Act requires agencies to prepare or adopt an environmental impact statement (“EIS”) before undertaking a major federal action that will significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(c); see also 40 C.F.R. § 1508.8(a) (defining human environment). The sheer number of marine mammals authorized to be harmed or harassed, together with the extent of the seismic testing and the controversy surrounding it, are significant. In addition, the sizeable negative economic impact on commercial fishing and sports fishing together with the resulting economic cost to the commercial fishing industry (processing, wholesaling and retailing) is significant. NMFS violated NEPA by failing to prepare an EIS despite these significant impacts.
107. Defendants’ failure to take a hard look at the true environmental impacts of the proposed action and to disclose this information in the EA violate NEPA and its implementing regulations, and is arbitrary, capricious, and otherwise not in accordance with law.
108. NMFS’s failure to prepare an EIS, or alternatively an adequate EA, is arbitrary, capricious and an abuse of discretion in violation of the APA.
109. The CEQ regulations implementing NEPA require that an EIS contain a statement of purpose and need for the proposed action which “shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including their proposed action.” 40 C.F.R. § 1502.13. A purpose is unreasonable when the agency defines it so narrowly as to allow “only one alternative from among the environmentally benign ones in the agency's power,” such that the EIS becomes

essentially “a foreordained formality.” Webster v. U.S. Dep’t of Agric., 685 F.3d 411, 422 (4th Cir. 2012). The EA’s brief statement of need can be summarized as wholly adopting the applicants’ statements regarding need. (EA, p. 10). NMFS made no independent determination of need. Moreover, the EA’s stated purpose is “to authorize take of marine mammals incidental to the geophysical surveys proposed by the five companies, consistent with applicable legal requirement.” (EA, p. 10). In so doing, NMFS defined the purpose in a manner that foreclosed it from denying the taking of marine mammals, and made the no action alternative a nullity for failure to accomplish the project purpose as defined by it. The NMFS’s statement of purpose and need fails to comply with 40 C.F.R. § 1502.13, and is arbitrary and capricious agency action.

110. NEPA requires an agency to include in an EIS a “detailed statement” on “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(C)(iii). In this statement, the agency must rigorously explore and objectively evaluate all reasonable alternatives that could achieve the underlying project purpose. 40 C.F.R. § 1502.14(a). This alternatives analysis is “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14.
111. Defendants failed to rigorously explore and objectively evaluate a reasonable range of alternatives to the proposed project, and failed to properly assess the alternatives presented in the EA. As such NMFS violated NEPA and its implementing regulations and constitute a violation of the Administrative Procedures Act. 5 U.S.C. § 701, et. seq.
112. NMFS decision to consider only two alternatives, one of which was foreclosed by its statement of purpose, is arbitrary and capricious and a violation of NEPA.
113. The EIS or EA must be prepared with objective good faith and must fully and fairly discuss the adverse environmental effects of the proposed action. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.1. NMFS violated NEPA by failing to thoroughly

discuss adverse environmental effects in an EIS or EA.

114. By considering all of the IHAs collectively in its Biological Opinion and Environmental Assessment, NMFS failed to undertake a cumulative effects analysis for each individual IHA to determine how those activities impact each other, effectively collapsing its cumulative effects requirement into one determination. The result is a failure to undertake a cumulative effects analysis as envisioned by the statute, and is arbitrary and capricious agency action.
115. The EIS or EA must rely on the best available scientific information. NMFS violated NEPA by relying upon outdated and inaccurate information.

PRAYER FOR RELIEF

WHEREFORE, plaintiffs respectfully request that this Court:

- A. An injunction prohibiting the five seismic airgun surveys authorized by NMFS to occur along the Atlantic OCS;
- B. An injunction against any seismic airgun surveying authorizations along the Atlantic OCS without compliance with the MMPA, ESA, NEPA and APA;
- C. Issue a declaratory ruling that the seismic airgun surveying authorizations are in violation of the Marine Mammal Protection Act, Endangered Species Act, National Environmental Policy Act, and/or Administrative Procedure Act;
- D. Enter a declaratory judgment that the Defendants have violated the National Environmental Policy Act (“NEPA”), 42 U.S.C. §§ 4321 et seq., its implementing regulations, 40 C.F.R. §§ 1500 et seq., by failing to prepare, circulate for comment and consider in their decision-making process a detailed Environmental Impact Statement concerning the proposed IHAs; by preparing an inadequate EA that fails to consider a reasonable range of alternatives, fails to properly assess the alternatives presented, and

fails to adequately analyze and disclose the environmental impacts of the proposed IHAs.

E. Award Plaintiffs all costs and expenses of this action; and

F. Award such additional relief as the Court deems proper.

Respectfully submitted this 11th day of December, 2018.

s/Amy E. Armstrong

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